Modeling for Deformable Mirrors and the Adaptive Optics Optimization Program*

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Abstract

Deformable mirror/Hartman sensor system and Beamlet laser system simulations are combined to investigate the linear noise terms from optics PSDs, uncorrectable noise from the deformable mirror, spatial filter clipping effects, and the nonlinear (high power) growth of amplitude and phase noise on beam quality and focusability. We will discuss mirror optimization and interaction with the wavefront sensor.